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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
KIMIO INOUE : EXAMINER: SORKIN, DAVID L.
SERIAL NO: 09/767,885 :
3RD RCE FILED: AUGUST 15, 2005 : GROUP ART UNIT: 1797
FOR: SCREW SET FOR EXTRUDER :

REPLY BRIEF UNDER 37 C.F.R. § 41.41

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313
SIR:

Appellants are submitting the following in reply to the Examiner's Answer issued on September 28, 2007.

The majority of the arguments presented in the Examiner's Answer also presented in the Final Rejection and are addressed in the Appeal Brief. The following responds to additional points in the Examiner's Answer which were not presenting the final rejection of the claims:

1. The claims recite an extruder having screw sets, each screw set comprising a rotor segment having rotor blades and a screw segment having screw blades, wherein the screw segment has the same sectional shape as the rotor segment except for the crest portions of the blades thereof. Inoue et al identifies the screw segments as elements 1a and the rotor segments as elements 1b (col. 5, lines 9-12).

There is no dispute that the Examiner has relied only on the rotor segments 1b of Inoue et al for teaching both the features of the claimed rotor segment and the claimed screw

segment, i.e., that the rotor segments 1b of Inoue et al have the same shape as the screw segments 1b. It is evidently the position of the Examiner that this is not inconsistent with the broadest reasonable interpretation of the claims because the term “screw segments” in the claims reads on both the screw segments 1a and the rotor segments 1b of Inoue et al.

There is no dispute that the examiner is entitled to give the claim terms their broadest reasonable interpretation, and that this refers to the plain meaning of the terms as understood by one of ordinary skill in the art. Appellants have previously submitted declarations under 37 C.F.R. § 1.132 of Dr. Inoue, an inventor of both the present application and that of the Inoue et al reference, as evidence of the plain meaning in the art of “screw segments” and “rotor segments.” For example, paragraphs 6-9 of the first Inoue declaration filed on August 1, 2003 describes that “rotor segment” and “screw segment” are terms of art, and that those skilled in the art would understand that each has different structures which are respectively optimized for their material kneading or advancement functions. Moreover, according to paragraph 10 of the declaration, “those skilled in the art would not identify an element designed and used as a rotor segment in an extruder as a ‘screw segment.’”

This evidence was again presented at paragraphs 6-11 in the second Inoue declaration filed on November 17, 2003. Paragraph 10 of the second Inoue declaration additionally gave examples of angular ranges of screw segments and rotor segments.

The Examiner’s Answer takes the position that the Inoue declarations contradict the disclosure of the Inoue et al reference and the instant specification, and so are not credible evidence. This is based on the disclosure of the angular range of the blades of the rotor segments in the Inoue et al reference being outside of the *exemplary* angular ranges for the rotor segments set forth in paragraph 10 of the second Inoue declaration. However, it is noted that the declarant did not aver that the angular ranges mentioned in paragraph 10 were anything more than exemplary ranges for screw or rotor segments. This averment was

provided to illustrate the usual angular ranges for rotor segments and does not preclude the possibility that rotor segments may have other angles. Thus one cannot properly impeach the credibility of the Inoue declarations simply by noting the possibility of other examples of rotor segments whose angles fall outside of such an *exemplary* range.

On the other hand, the fundamental conclusion set forth in the Inoue declaration is uncontradicted by evidence: that those skilled in the art would not identify an element designed and used as a rotor segment in an extruder to be a screw segment. Indeed, this is supported – not contradicted – by the Inoue et al reference which explicitly distinguishes the screw segments 1a from the rotor segments 1b; if the Inoue declarations were indeed inconsistent with the disclosure of the Inoue et al reference, the Inoue et al reference would simply have referred to both elements as rotor segments 1b. In view of this evidence and the absence of contradictory evidence, Appellants respectfully submit that the broadest reasonable interpretation of “screw elements” in the claims cannot include the rotor elements 1b of Inoue et al.

2. The claims also recite an extruder wherein the extruder barrel has an extrusion opening at the axial end thereof. Inoue et al discloses two embodiments. A first embodiment shown in Figs 1-7 is a kneading apparatus (col. 4, lines 38-43). The segments relied upon in the Examiner’s answer are those of the first embodiment. A second embodiment shown in Figs. 11-15 is a kneader/extruder (col. 10, lines 50-53). It is evident from Fig. 11 of Inoue et al that the sectional shape of the rotor segments 21b of the second embodiment is different from the sectional shape of a screw segment thereof (an exemplary sectional shape of a screw segment is seen in Fig. 3) and does not conform to the claims.

It is undisputed that the kneader in the first embodiment of Figs. 1-7 of Inoue et al lacks an extrusion opening at an axial end. In recognition of this shortcoming, the Examiner

has taken the position that it would have been obvious in view of the kneader/extruder of the second embodiment of Inoue et al to have modified the kneader in the first embodiment of Figs. 1-7 to provide an extrusion opening at the axial end thereof.

The Appeal Brief had pointed out that since this modification would have converted the non-extruding kneader of Figs. 1-7 to a kneader/*extruder*, one skilled in the art would in this case have also modified the screw sets of the first embodiment according the screw sets of the second embodiment, which screw sets would not have conformed to the Examiner's interpretation of the claims.

The Examiner's Answer has now pointed to lines 30-33 of col. 14 of Inoue et al to support this modification. This portion of the reference states that the second embodiment may also be a continuous kneading apparatus rather than a kneading/extrusion apparatus. It is submitted, however, that this description simply indicates that the axial extrusion opening of the second embodiment may be eliminated; it does not suggest that one should adopt the screw construction of the first embodiment in the kneading/extrusion apparatus of the second embodiment. Thus this description does not support the proposed modification.

Appellants therefore believe that the final rejection is improper and request that it be REVERSED.

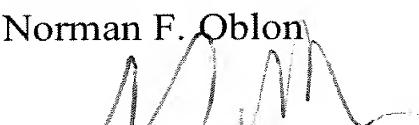
Respectfully submitted,

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